

## AS1701

### 1 Part Non-Corrosive Neutral Cure Adhesive Sealant (Electronic Grade)

#### Description

This is a non-corrosive, neutral cure, 1-part, RTV (Room Temperature Vulcanising) silicone adhesive sealant. It is one in a range of Alkoxy cure products which are solvent free. It exhibits excellent primerless adhesion to many substrates and cures at room temperature when in contact with atmospheric moisture to form a tough rubber. This product will not corrode copper or its alloys and is suitable for use with electronic components.

#### Key Features

- Non corrosive
- Excellent adhesion to most substrates
- Fast skinning
- Non slumping paste

#### Application

Vibration damping and board coating e.g. voltage regulators

#### Use and Cure Information

This product is a ready for use 1 Part system. If supplied in cartridges it can be applied using either manual or pneumatic dispensing guns. It can also be applied from bulk containers using conventional drum dispensing equipment.

All surfaces to which the sealant is to be applied should be clean, dry and free from grease, dirt, and loose material. Priming of surfaces is not normally required. If using as an adhesive, it should be applied to one clean surface and the other clean surface brought into contact with it within the tack free time stated opposite. For optimum bond strength, the thickness of the sealant joint should be a minimum of 1 mm.

The sealant will cure upon exposure to atmospheric moisture, ideally between 20 to 30 °C and 40% to 70% Relative Humidity. Time taken for cure will depend on the thickness of the joint, humidity and temperature. Joints should be left undisturbed for at least 24 hours, but preferably longer to effect sufficient depth of cure. Full cure requires 7 days.

“For pneumatic dispensing of 310 ml cartridges, the recommended pressure is 2.25 to 3.45 bar (40 to 50 psi). Dispensing pressure above the recommended limits may lead to gas bypassing the piston, causing spluttering at the nozzle and poor bead quality”

It is important to check the compatibility in preliminary tests if unknown substrates are used.

#### Health & Safety

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Safety Data Sheets available on request.

#### Packaging

CHT Adhesives are available in a variety packaging including cartridges and bulk containers. Please contact our sales department for more information.

Revision Date 29 Apr 2021  
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#### Property

#### Uncured Product

Property	Test Method	Value
Cure Through to 3 mm Depth		24 hr
Cure Type		Alkoxy
Drying / Fixing Conditions		23+/-2°C and 50+/-5% humidity
Rheology		Paste
Self Bonding		Yes
Tack Free Time / Skin Formation at 23°C/73°F		3 min

#### Cured Product

Property	Test Method	Value
<b>7 days at 23+/-2°C and 50+/-5% humidity</b>		
100% Modulus (N/mm <sup>2</sup> )		2.1 MPa / 305 psi
Colour		Black
Density	BS ISO 2781	1.28 g/cm <sup>3</sup>
Elongation at Break (%)	ISO 37	200 %
Hardness Shore A	ASTM D 2240-95	52
Linear Coefficient of Thermal Expansion (ppm/°C)		230 ppm/°C
Linear Shrinkage (%)		1 %
Max Working Temp (°C)		220 °C / 428 °F
Min Working Temp (°C)		-50 °C / -58 °F
Tear Resistance (N/mm)	BS ISO 34-1	19.1 N/mm / 110 ppi
Tensile Strength (N/mm <sup>2</sup> )	ISO 40	2.35 N/mm <sup>2</sup> / 341 psi
Thermal Conductivity (W/mK)		0.6 W/mK
Volume Coefficient of Thermal Expansion (ppm/°C)		690 ppm/°C
Youngs Modulus (N/mm <sup>2</sup> )		1.8 N/mm <sup>2</sup> / 261 psi

#### Electrical Properties

Dielectric Breakdown (kV/mm)		33.33 kV
Dielectric Constant	ASTM D-150	2.92
Dielectric Strength (V/mil)		>457 V/mil
Dielectric Strength kV/mm	ASTM D-149	>18 kV/mm / 0 V/mil
Dissipation Factor	ASTM D-150	0.0012
Volume Resistivity (Ohms cm)	ASTM D-257	7.85E+15 ohms cm

#### Adhesion Testing

Lap Shear Aluminium kg/cm <sup>2</sup>	ASTM D1002	10.78 kg/cm <sup>2</sup>
Lap Shear Copper kg/cm <sup>2</sup>	ASTM D1002	10.06 kg/cm <sup>2</sup>

The content set out in the technical data sheet does not contain information upon which you should rely. It is provided for general information purposes only and does not constitute a product specification. You must obtain professional or specialist advice before taking any action based on the information provided in the technical data sheet.

CHT make reasonable efforts to ensure that information set out in the technical data sheet is complete, accurate, and up-to-date. CHT do not, however, make any representations, warranties or guarantees (whether express or implied) that information set out in the technical data sheet is complete, accurate, or up-to-date or that the product will be suitable for your requirements. You should carry out your own testing to determine the applicability of such information and whether the product will be suitable. CHT reserve the right to modify the technical data sheet at any time.

The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

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<b>Property</b>	<b>Test Method</b>	<b>Value</b>
Lap Shear Polycarbonate Steel kg/cm <sup>2</sup>	ASTM D1002	<b>5.93 kg/cm<sup>2</sup></b>
Lap Shear Stainless Steel 304 kg/cm <sup>2</sup>	ASTM D1002	<b>2.98 kg/cm<sup>2</sup></b>
<b>Storage</b>		
Max Storage Temperature		<b>40 °C / 104 °F</b>
Shelf Life (mths)		<b>12</b>

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